

## UTILIZATION OF GEO-SPATIAL AS METHOD FOR TRENDS PREGNANCY COMPLICATION, A CASE STUDY OF RURAL AND URBAN

NUGROHO SUSANTO<sup>1</sup>, CHATARINA UW<sup>2</sup>, HARI BASUKI N<sup>3</sup>, STEFANUS SUPRIYANTO<sup>4</sup>, KUNTORO<sup>5</sup>,  
LUTFAN LAZUARDI<sup>6</sup>, WINDHU PURNOMO<sup>7</sup>, FLORENTINA SUSTINI<sup>8</sup>

<sup>1</sup>Department of Epidemiology, Health Science Faculty, Respati University, Yogyakarta, Indonesia

<sup>2</sup>Department of Epidemiology, Public Health Faculty, Airlangga University, Surabaya, Indonesia

<sup>3,5,7</sup>Department of Bio statistic, Public Health Faculty, Airlangga University, Surabaya, Indonesia

<sup>4</sup>Department of Health Administration and Policy, Public Health Faculty of Airlangga University, Surabaya, Indonesia

<sup>6</sup>Department of Health Informatics, Medicine Faculty, Gadjah Mada University, Yogyakarta, Indonesia

<sup>8</sup>Department of Epidemiology, Medicine Faculty, Airlangga University, Surabaya, Indonesia

### ABSTRACT

**Background:** Maternal and infant mortality is a problem in many parts of the world. Epidemiological factors play an important role in the distribution of complications during pregnancy. Location identified as place and socioeconomic status contributed to health problems in the region. Environmental factors play an important role on issues of maternal and child health, especially as the slope of the neighborhood. Slope of land is a factor related to the mother's pregnancy health. Location of pregnant women is a factor associated with health problems during pregnancy such as the difficult to access of services. Pregnancy had a height location area important role incidence of hemorrhage and eclampsia. Display data by mapping easier to understand and interesting, thus data more accuracy is displayed.

**Method:** A spatial data mapping with cross sectional study based regions between rural and urban areas. Sample was required total 612 pregnant with 306 collected urban area and 306 collected rural area. Data were collected by physical examination, interviews and ordinate point. Data were analyzed with Epi info Program and health mapper program.

**Results:** Rural areas are dominated proportion abortion higher twice than urban areas 10.5%, 4.9%. Proportion of SC greater in rural areas (2.0%) than urban (0.3%). proportion of bleeding greater in rural areas (11.4%) than urban areas (3.6%), proportion of eclampsia greater in rural areas (6.9%) than urban (3.3%), while the condition of anemia in both regions showed a similar 87.6%, 87.9%. Location of pregnant bleeding around community health service reached more 3 km<sup>2</sup> and some pregnant with bleeding conditions are in a location away from the main street of the village.

**Conclusion:** This study shown that cases of bleeding and eclampsia greater in rural areas, thus rural areas is main focus of study related pregnant health. Spatial analyzed used to construct the buffer neighborhoods might far outweigh the value added to the statistical analysis, especially because the census geography neighborhoods showed very similar statistical effects.

**KEYWORDS:** Geo-Spatial, Pregnant, Complication